

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 8, line 2 and ending on page 9, line 12, with the following amended paragraph:

Fig. 3 shows a flowchart of a main routine executed by the CPU 201 in this system. The input image data processed by this system are 8-bit (256-gradation) density data of red (R), green (G) and blue (B). The image data are received from various input means as shown in Fig. 2 and, if necessary, are subjected to preprocessing such as conversion of resolution or change in modification factor. At step S101, image data are subjected to binarization for labeling pixels with respect to the color of a circular pattern (mark) to be detected. In the binarization, if the density value of a pixel is within a predetermined reference density range in the image on the color of the circular pattern, the pixel is decided to be an on-pixel having value of one, otherwise it is decided to be an off-pixel having value of zero. Next, the position of a circular pattern candidate is detected at step S102. The following steps are performed to check whether the detected candidate is the true circular pattern to be detected. At step S103, the detected circular pattern candidate is checked on vertical size, horizontal size and ratio of the vertical size to horizontal one. Next, at step S104, it is checked whether there are pixels having predetermined values at a plurality of points on a circle and outside the circle of the circular pattern candidate. Hereinafter a pixel having a predetermined value, that is, an on-pixel [[ir]] or an off-pixel is referred to as a specified pixel. Next, at step S105, density check is performed to count the specified pixels of the binarized circular pattern candidate and to compare it with a reference value thereof, as will be explained in detail later. Next, at step S106, pattern matching is performed on the circular pattern to be

detected and the detected circular pattern candidate in the radial and circumferential directions, by taking rotation into account. Next, at step S107, it is calculated based on the check at steps S103 and S106 whether the circular pattern candidate matches the circular pattern to be detected.